Climate
Control

IMI TA

TA-Slider 500 – UL certified

Actuators

Digitally configurable proportional push-pull actuator – 112/67 lbf (500/300 N)

Breakthrough
engineering for
a better world

TA-Slider 500 – UL certified

Digitally configurable actuators with a wide range of setup options provide extensive flexibility for on-site parameter adaptation. Fully programmable binary input, relay and adjustable maximum stroke of the valve bring new opportunities for advanced hydronic control and balancing.

Key features

Convenient, reliable setup
Fully customisable by smartphone via Bluetooth using a TA-Dongle.

Fully configurable
More than 200 setup options allow input and output signals, binary input, relay, characteristics and many other parameters to be configured.

Easy diagnostics
Tracks the last 10 errors to allow system faults to be found quickly.

Quick copy of settings
Identical settings can be quickly copied from TA-Dongle to several TA-Slider actuators.

Technical description

Functions:
Proportional control
Manual override (TA-Dongle)
Stroke detection
Mode, status and position indication
Stroke limitation setting
Minimum stroke setting
Valve blockage protection
Valve clogging detection
Error safe position
Diagnostic/Logging
Delayed start-up

Supply voltage:
24 VAC/VDC ±15%.
Frequency 50/60 Hz ±3 Hz.

Impulse voltage:
330 V

Power consumption:
Operation: < 3.2 VA (VAC); < 1.6 W (VDC)
Standby: < 1.3 VA (VAC); < 0.6 W (VDC)

Input signal:
0(2)-10 VDC, R_i 47 kΩ.
Adjustable hysteresis sensitivity 0.1-0.5 VDC.
0.33 Hz low pass filter.
Proportional:
0-10, 10-0, 2-10 or 10-2 VDC.
Proportional split-range:
0-5, 5-0, 5-10 or 10-5 VDC.
0-4.5, 4.5-0, 5.5-10 or 10-5.5 VDC.
2-6, 6-2, 6-10 or 10-6 VDC.
Default setting: Proportional 0-10 VDC.

Characteristics:
Linear, EQM 0.25 and inverted EQM 0.25.
Default setting: Linear.
Action: Type 1

Stroke:
0.64 in (16.2 mm)
Automatic detection of the valve lift (stroke detection).

Control speed:
101.6 or 154 s/in (4 or 6 s/mm).
Default setting: 101.6 s/in (4 s/mm).

Actuating time:
Full stroke extend/retract time: 65 s

Adjusting force:
Push 112 lbf (500 N)
Pull 67 lbf (300 N)

Temperature:
Media temperature: max. 248°F
Operating environment: 32°F to 122°F (5-95%RH, non-condensing)
Storage environment: -4°F to 158°F (5-95%RH, non-condensing)

Ingress protection:
IP54 (all directions)
(according to EN 60529)

Protection class:
(according to EN 61140)
III TA-Slider 500

Cable:
3.28 ft, 6.56 ft or 16.4 ft. With wire end sleeves.
TA-Slider 500: type LiYY, 3x23 AWG (3x0.25 mm^2).

Noise level:
Max. 30 dBA

Weight:
TA-Slider 500:
0.51 lb, 3.28 ft relay cable
0.60 lb, 6.56 ft relay cable
0.88 lb, 16.4 ft relay cable

Connection to valve:
Retainer nut M30x1.5.
Independently mounted.

Material:
Cover: PC/ABS GF8
Housing: PA GF40.
Swivelling nut: Nickel-plated brass.

Color:
White RAL 9016, grey RAL 7047.

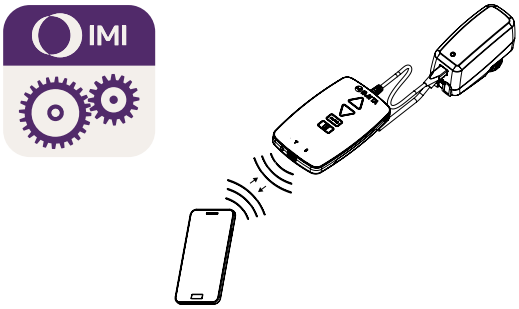
Marking:
Label: IMI TA, CE, UL, product name, article No. and technical specification.

Certification:
UL. E520892.
EMC-D. 2014/30/EU: EN 60730-1, -2-14.
RoHS-D. 2011/65/EU: EN 63000.

Product standard:
EN 60730.
Pollution: Degree 2.

Function

Setting
The actuator can be set by the HyTune app (iOS version 16 or later, Android version 9 or later) + the TA-Dongle device, with or without the actuator power supplied.
The setting configuration can be stored in the TA-Dongle for setting of one or several actuators. Connect the TA-Dongle to the actuator and press the configuration button.
HyTune can be downloaded from the App Store or Google Play.



Manual override
By using the TA-Dongle device. No power supply needed.

Calibration/Stroke detection
According to selected settings in the table.

Type of calibration	At power on	After manual override
Both end positions (full)	√ *	√
Fully extended position (fast)	√	√ *
None	√	

*) Default

Note: A calibration refresh can be automatically repeated monthly or weekly.
Default setting: Off.

Stroke limitation setting
A maximum stroke smaller than or equal to the detected valve lift can be set to the actuator.
For some IMI TA/IMI Heimeier valves it can also be set to a Cv_{max}/q_{max}.
Default setting: No stroke limitation (100%).

Minimum stroke setting
The actuator can be set with a minimum stroke below which it will not go (except for calibration).
For some IMI TA/IMI Heimeier valves, it can also be set to a q_{min}.
Default setting: No minimum stroke (0%).

Valve blockage protection
If no actuation is performed for one week or one month, the actuator will perform one full stroke cycle.
Default setting: Off.

Valve clogging detection
If actuation stops before the desired value is reached, the actuator moves back ready to make a new attempt. The actuator will move to the configured error safe position after three attempts.
Default setting: On.

Error safe position
Fully extended or retracted position when following errors occur; low power, line break, valve clogging or stroke detection failure.
Default setting: Fully extended position.

Diagnostics/logging
The last 10 errors (low power, line break, valve clogging, stroke detection failure) with time-stamps are readable by the HyTune app + TA-Dongle device. Time-stamps of past errors will be cleared if the power is disconnected.

Delayed start-up
The actuator can be specified a delay (0 to 1275 sec.) before starting up after a power supply cut. This is useful when used with a control system that has itself a long start-up time.
Default setting: 0 seconds.

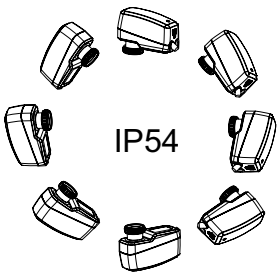
LED indication

	Status	Red (heating) / Blue (cooling)
	Fully retracted (actuator stem)	Long pulse - Short pulse
	Fully extended (actuator stem)	Short pulse - Long pulse
	Intermediate position	Long pulses
	Moving	Short pulses
	Calibrating	2 short pulses
	Manual mode or no power supply	Off

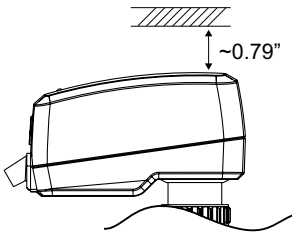
	Error code	Violet
	Power supply too low	1 pulse
	Line broken (2-10 V)	2 pulses
	Valve clogging or foreign object	3 pulses
	Stroke detection failure	4 pulses

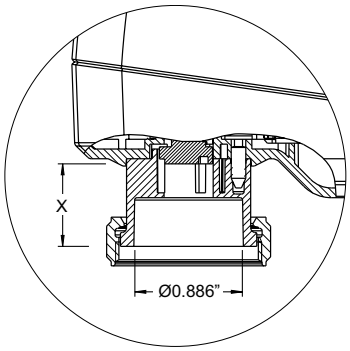
If an error is detected, violet pulses are displayed as the red or blue status lights flash alternately.
More detailed information, please see the HyTune app + TA-Dongle.

Installation



Note!

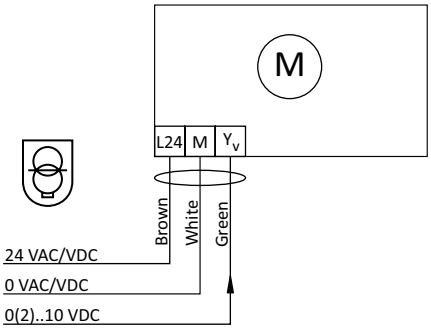




X = 0.303” - 0.941”

Connection diagram

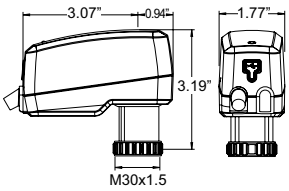
TA-Slider 500



Terminal	Description
L24	Power supply 24 VAC/VDC
M	Neutral for power supply 24 VAC/VDC and signals.
Y_V	Input signal for proportional control 0(2)-10 VDC, 47 kΩ

24 VAC/VDC operating only with safety transformer according to EN 61558-2-6.

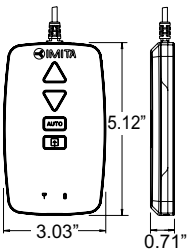
Articles – TA-Slider 500



TA-Slider 500
Input signal: 0(2)-10 VDC

Cable length	Supply voltage	Article No
3.28 ft. (1 m)	24 VAC/VDC	322042-50009
6.56 ft. (2 m)	24 VAC/VDC	322042-50010
16.4 ft. (5 m)	24 VAC/VDC	322042-50011

Additional equipment



TA-Dongle
For Bluetooth communication with the HyTune app, transfer configuration settings and manual override.

Article No
322228-00001

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